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## THE COST OF LIVING AS A FACTOR IN RECENT WAGE ADJUSTMENTS IN THE BOOK AND JOB BRANCH OF THE CHICAGO PRINTING INDUSTRY

NOTE: The author acted as consulting statistician for the Franklin-Division of the Franklin-Typothetae of Chicago during the various wage adjustments of 1919-1921. He desires it to be understood that any opinions expressed reflect his own views and are not in any way to be identified with those of the Franklin-Division.

The adjustment of wages in American industry during both the period of price inflation due to war causes and the more recent period of price deflation has been a difficult problem. The varying purchasing power of the dollar has been responsible for considerable of the industrial unrest with which industry has had to deal.

In a current article in the *International Labour Review*, which reviews experience with the adjustment of wages to the cost of living in various countries from 1914-1921, the statement is made that "in the United States relatively few examples exist of the automatic adjustment of wages to the cost of living."<sup>1</sup>

In this connection, the experience of the book and job branch of the printing industry in Chicago with the adjustment of wages to the cost of living during these trying years of extreme price fluctuations is of interest because it involved the adjustment of fixed wage scales in long time contracts between employing printers and various printing trade unions. Furthermore, it covered a period, 1916-1921, during which there was a steady increase in the cost of living up to June, 1920, followed by a substantial decrease.

The cost-of-living principle which was the basis for these adjustments has of late been subject to severe criticism. The Executive Council of the American Federation of Labor reported at the 1921 Convention at Denver, Colorado, in part as follows:

The practice of fixing wages solely on a basis of the cost of living is a violation of the whole philosophy of progress and civilization and, furthermore, is a violation of sound economic theory and is utterly without logic or scientific support of any kind.<sup>2</sup>

The purpose of this article is not to defend the use of the cost-of-living principle as a factor in wage adjustments, but simply to describe how it worked out as a basis for stabilizing the workman's dollar in one industry when it was actually put to the test.

Book and job printing is an important Chicago industry. Next to New York, Chicago is the largest printing center in the United States.

<sup>1</sup> *International Labour Review*, July-August, 1921, p. 164, published by International Labour Office, League of Nations, Geneva.

<sup>2</sup> *The American Pressman*, August, 1921, p. 22. (Journal of the International Pressmen and Press Assistants' Union.)

Those employers in the book and job branch of the printing industry of Chicago who deal with unions control approximately 55 to 60 per cent of the production. They employ upwards of 3,500 compositors, 1,800 pressmen, 2,400 feeders, 1,000 bookbinders, and several hundred bindery women totalling somewhere between 9,000 and 10,000 employees. The annual mechanical payroll in 1919 amounted to \$10,000,000 or over.<sup>3</sup> The annual value of product has been estimated at over \$30,000,000.<sup>4</sup>

A majority of the employers who deal with the unions are members of the Franklin-Division of the Franklin-Typothetae of Chicago, an employing printers' organization subsidiary to the Franklin-Typothetae, the parent body or trade organization.<sup>5</sup> It is through this Franklin-Division that the printing trade unions have negotiated their contracts for the past six years.<sup>6</sup>

The printing trade unions with which the employing printers usually deal are the Typographical Union which embraces in its membership composing room employees, those who set type either by hand or machine; the Pressmen's Union which is made up of those pressroom employees who make ready and operate the printing presses; the Press Assistants' or "Feeders'" Union which includes those pressroom employees who feed the paper into the presses; and the Bookbinders' Union which embraces in its membership the forwarders, finishers, cutters and other skilled employees in the bindery.<sup>7</sup> The nature of the work of compositors and pressmen especially is such that it requires a high degree of skill and intelligence. Some of the operations in the bindery also come under this category. As a rule a large percentage of the employees in the different mechanical departments of printing establishments are of American stock or at least were born in the United States. The high level of intelligence among printing trades employees and the common racial background with their employers are factors

<sup>3</sup> *Transcript of Arbitration Proceedings. Franklin-Division of the Franklin-Typothetae of Chicago vs. Typographical Union No. 16, Pressmen's Union No. 3, Franklin Union No. 4, Bookbinders & Paper Cutters' Union No. 8, Chicago, April 18, 1921*, p. 16.

<sup>4</sup> 60 per cent of 1914 U. S. *Census of Manufactures* figures for Chicago.

<sup>5</sup> The Typothetae Division, which is composed of employing printers who maintain open shops, also is subsidiary to the parent body. By this form of organization it is possible for employing printers who differ fundamentally on methods of labor control to get together on common ground in the parent body which confines its activities to the improvement of business methods and the development of high trade standards.

<sup>6</sup> The Franklin-Division was organized in 1915 and superseded the Chicago Employing Printers Association which had previously dealt with the unions for several years.

<sup>7</sup> The bindery women frequently have a separate local union. This is the case in Chicago.

which should be borne in mind in an examination of the collective bargaining process.

In 1916 the Franklin-Division of the Franklin-Typothetae of Chicago entered into five-year contracts with Typographical Union No. 16, Pressmen's Union No. 3, and Franklin Union No. 4, the Feeders' Union, which were to expire in the fall of 1921. At the same time a three-year contract was entered into with Bookbinders' and Paper Cutters' Union No. 8, which through renewals also came to extend over the same five-year period.

According to these contracts the base scale for day work per week for the Typographical Union was set at \$25.00 until May 1, 1919, when it was to become \$26.00, this wage to continue until the expiration of the contract in 1921; the base scale for the Pressmen's Union was set at \$26.00 until June 1, 1919, when it was to become \$27.00, this to continue until the expiration of the contract in 1921; the base scale for the Feeders' Union was set at \$18.50 to continue until the expiration of the contract in 1921; and the base scale of the Bookbinders' Union was set at \$22.00 until October 1, 1918, when it was to become \$23.00, continuing until the expiration of the contract in the fall of 1919.<sup>8</sup>

These scales were set after several months of preliminary negotiation between the different unions and the Franklin-Division and as will be observed from the data in Table 1 resulted in an increase of \$1.00 in the basic scale of each union. The scales set were among the highest existing in any printing center at the time. It is quite evident from the fact that long time contracts were entered into at a relatively small increase in basic wage scales that neither the employers nor the unions anticipated the fluctuations in the purchasing power of the dollar which were to follow. It should be noted that the differential between the base wage scales of the Pressmen's and the Feeders' Union was \$7.50. This differential was based on difference in skill and responsibility in the two pressroom occupations. It is also important to note that the base scale of the Feeders was considerably lower than that of the Compositors and Bookbinders.

A year passed during which the cost of living rose perceptibly in Chicago as in other industrial centers. Whereas the family budget index number according to the U. S. Bureau of Labor Statistics in December, 1916 for Chicago was 119.5 on a 1914 base, in December, 1917 it had risen to 141.8.<sup>9</sup> The employers felt the first reaction from the increase in the cost of living from the Feeders' Union—the union with the lowest scale. Its officials requested a conference with the scale com-

<sup>8</sup> *Transcript of Arbitration Proceedings, etc.* April 18, 1921, pp. 61-66.

<sup>9</sup> U. S. Bureau of Labor Statistics, *Monthly Labor Review*, July, 1921, p. 106.

TABLE 1.—NOVEMBER 1916 WAGE ADJUSTMENT (NEW CONTRACTS)

	Previous wage	Wage increase	Total wage	Wage index number 1916 base	Cost of living index number 1916 base	Purchasing power of 1916 contract wage dollar
Typographical Union No. 16.....	\$24.00	\$1.00	\$25.00	100	100 <sup>1</sup>	\$1.00
Printing Pressmen's Union No. 3.	25.00	1.00	26.00	100	100	1.00
Franklin Union (Feeders) No. 4	17.50	1.00	18.50	100	100	1.00
Bookbinders' and Paper Cutters' Union No. 8 (Edition Binders)	21.00	1.00	22.00	100	100	1.00

<sup>1</sup> U. S. Bureau of Labor Statistics, family budget index number of December, 1916, for Chicago was 119.5 on a 1914 base of 100. This index number is given the value of 100 on a December 1916 base in the above table.

mittee of the Franklin-Division early in December, 1917, at which a demand was made for a \$5.00 increase. The employers while they were protected by the 1916 contract, in consideration of the upward trend of prices made a counter offer of a \$1.00 increase. Without waiting for further negotiations, although a date for another conference in a few days had been set, the Feeders resorted to "direct action" and struck illegally. They returned to work almost immediately, however, as the employers proposed a war bonus of \$2.50 which they accepted.<sup>10</sup> Thus by "direct action" the Feeders forced the employers to increase their wages \$1.50 over the original offer of \$1.00.

The Franklin-Division having granted a war bonus to the Feeders proceeded within the next week to grant similar war bonuses of \$2.50 to the other unions. The change in the various wage scales through the granting of the war bonuses is shown in Table 2. In this first adjustment of the original contract scales no systematic method of securing reliable cost-of-living data as a basis was followed. The war bonus of \$2.50 was a compromise between the Feeders' demand for \$5.00 backed up by "direct action" and the employers' original offer of \$1.00. Considering the fact that \$2.50 was more representative of the actual 18 per cent increase in the cost of living between 1916 and 1917 in Chicago measured in Feeders' wages than either the Feeders' demands or the employers' offer, it was a reasonable amount for both sides to finally compromise upon. Moreover, since the Feeders had been given a war bonus, it was sound business policy to grant similar bonuses to the other unions.

The cost of living continued to rise and a few months after the em-

<sup>10</sup> Before the National War Labor Board, Chicago Franklin Union No. 4 of the I. P. P. & A. U. vs. Franklin Division of the Franklin-Typothetae of Chicago, Docket No. 105. Argument and Statement of Facts in Opposition to the Demand of the Chicago Franklin Union No. 4 for a Wage Increase of \$5.00 per Week. Levy Mayer of Counsel, Chicago, August 26, 1918, pp. 4-5.

TABLE 2.—DECEMBER 1917 WAGE ADJUSTMENT

	Previous wage	Wage increase	Total wage	Wage index number 1916 base	Cost of living index number 1916 base	Purchasing power of 1916 contract wage dollar
Typographical Union No. 16....	\$25.00	\$2.50	\$27.50	110.0	118.6 <sup>1</sup>	.927
Printing Pressmen's Union No. 3	26.00	2.50	28.50	109.6	118.6	.924
Franklin Union (Feeders) No. 4	18.50	2.50	21.00	113.5	118.6	.957
Bookbinders' and Paper Cutters' Union No. 8 (Edition Binders)	22.00	2.50	24.50	111.3	118.6	.938

<sup>1</sup> U. S. Bureau of Labor Statistics, family budget index number of December 1917 for Chicago was 141.8 on a 1914 base of 100. The index number in the table is 141.8, transferred from a 1914 to a 1916 base.

ployers had adjusted wages in May, 1918, newly elected officials of the Feeders' Union waited on the Franklin-Division with an ultimatum of a \$5.00 increase in wages or strike. The scale committee of the Franklin-Division in view of the illegal strike of the Feeders, the previous December, refused to yield to their demands and on June 3 the Feeders struck illegally for the second time. After a strike of ten days the Feeders returned to work under an arrangement by which the adjustment of the difficulty was left to the National War Labor Board, if a satisfactory agreement with the employers could not be reached within three days.<sup>11</sup>

Failing of settlement locally by the parties to the controversy the case came up before the War Labor Board during the summer months and the Board rendered a decision on September 27, 1918, in part as follows:

The Board finds that the index of the Bureau of Labor Statistics for cost of living in Chicago, Illinois, shows percentage increase since the date of the wage adjustment between the parties to this controversy in December, 1917, is 16.2 per cent and the award following is based solely upon this consideration.

1.—Wages. The wages of all members of Franklin Union No. 4 of the International Printing Pressmen and Assistants' Union employed by the Franklin-Division of the Franklin-Typhothetae of Chicago shall be increased by the sum of three dollars and fifty cents (\$3.50) per week.

2.—Retroactive Pay. This award shall be retroactive to the date upon which the individual members of Franklin Union No. 4 returned to work following the submission of this case to the National War Labor Board on June 12, 1918.

\* \* \* \* \*

4.—Period of Award. The rates herein fixed, except as changed by minor readjustments, shall remain in force during the war; provided, however, that on the first day of February, 1919, and at the end of each six months' period thereafter, should conditions materially change, making a readjust-

ment by this Board equitable, application may be made to the Board by either party.<sup>12</sup>

\* \* \* \* \*

By this decision the Feeders received a second war bonus amounting to \$3.50 which the National War Labor Board arrived at by comparing the U. S. Bureau of Labor Statistics family budget index number of 141.8 for Chicago for December, 1917 with the index number for August, 1918, which was 164.9. The increase of 16.2 per cent on the 1917 base was applied to the Feeders' wages of \$21.00 as adjusted in December, 1917 and the amount obtained, \$3.50, awarded as an additional cost-of-living war bonus retroactive to June 12, 1918.<sup>13</sup>

No sooner had the award in the Feeders' case been handed down than the other unions requested that the employers grant them additional war bonuses also. After a series of conferences substantial bonuses were given the compositors and pressmen effective October 21, 1918 which closely approximated the 16 per cent increase in the cost of living used in adjusting the Feeders' wages. The Binders were also granted a bonus retroactive to July 25, 1918. As in the case of the previous war bonuses it will be observed that the granting of these bonuses was brought about by "direct action" on the part of the Feeders. The wage adjustments of 1918 are shown in detail in Table 3:

TABLE 3.—JUNE TO OCTOBER WAGE ADJUSTMENT, 1918

	Previous wage	Wage increase	Total wage	Wage index number 1916 base	Cost of living index number 1916 base	Purchasing power of 1916 contract wage dollar
Typographical Union No. 16....	\$27.50	\$5.00	\$32.50	130.0	138. <sup>1</sup>	\$.942
Printing Pressmen's Union No. 3	28.50	5.00	33.50	128.8	138.	.933
Franklin Union (Feeders) No. 4	21.00	3.50	24.50	132.4	138.	.959
Bookbinders' and Paper Cutters' Union No. 8 (Edition Binders)	24.50	3.50	28.00	127.2	138.	.921

<sup>1</sup> U. S. Bureau of Labor Statistics, family budget index number of August 1918 for Chicago was 164.9 on a 1914 base of 100. This figure for August 1918 was especially prepared by the U. S. Bureau of Labor Statistics for the War Labor Board. The index number in the table is 164.9, transferred from a 1914 to a 1916 base.

The upward trend of prices continued. In January, 1919, the Feeders met with their employers to request another readjustment of wages, on the basis of the award of the National War Labor Board,

<sup>12</sup> National War Labor Board, *Docket 105, Finding in re Franklin Union No. 4 vs. Franklin-Division of the Franklin-Typotheiae of Chicago*.

<sup>13</sup> *Before the National War Labor Board, Docket No. 105. Appeal from the Examiner's Interpretation of the Award of September 27, 1918.* Levy Mayer of Counsel, Chicago, October 9, 1918. P. 3.

which provided that at intervals of six months during the war, either party might appeal to the board for a readjustment of wages if conditions had been materially changed. While the armistice had been signed the previous November, the Feeders claimed that technically the war was not over and the War Labor Board still had jurisdiction. The request of the Feeders was followed by a joint communication signed by the Compositors, Pressmen, Feeders and Bookbinders, referring to the War Labor Board award and asking for an increase in wages.

A series of conferences followed between the scale committee of the Franklin-Division and the joint scale committee of the four unions, which resulted in the drafting of a supplemental agreement of February 3, 1919 to the 1916 contracts, which bound all the parties to the agreement to "jointly and separately live up to all the terms and conditions set forth therein."<sup>14</sup> Under this agreement, the Compositors, Pressmen's and Bookbinders' Unions each received an increase of \$3.50 a week and the Feeders an increase of \$4.00 a week. The supplemental agreement provided that there should be no more wage adjustments during the life of the different contracts, in the following language:

It is further agreed that this agreement shall be in force and remain in effect for the full period of the existing contract, and there shall be no further changes in the matter of hours of labor or rate of compensation during the remaining period of the existing contracts.<sup>15</sup>

The wage adjustment of February 3, 1919, differed from previous adjustments in that the Feeders for the first time secured a wage increase through constitutional processes. They did not resort to direct action tactics as they had done in the past. Where previously the Feeders had secured increases which had led to the granting of war bonuses to the other unions, on this occasion through concerted action the unions brought about all adjustments at one and the same time. By entering into a joint agreement the Compositors, Pressmen and Binders virtually underwrote the Feeders thereby guaranteeing the employers protection against "direct action." The increase in the cost of living, approximately 5 per cent since the last adjustments, was an important factor in determining the wage increases granted. Also a factor of weight was the agreement of the various unions not to ask for any further wage increases during the life of the various contracts. The wage adjustments of February 3, 1919 are shown in detail in Table 4. Since a wage increase at a specified date provided for in the 1916 contracts of some of the unions was absorbed in the cost-of-living adjustment at the nearest specified date to that on which the contract

<sup>14</sup> *Transcript of Arbitration Proceedings, etc.*, April 18, 1921, pp. 72-82.

<sup>15</sup> *Ibid.*, p. 79.

wage increase was due, in Table 4 and in the tables that follow, allowance has been made in each case in computing the wage index number, for the increase provided by original contract, in terms of the purchasing power of the 1916 dollar at each date.

TABLE 4.—FEBRUARY 3, 1919, WAGE ADJUSTMENT

	Previous Wage	Wage increase	Total wage	Wage index number 1916 base	Cost of living index number 1916 base	Purchasing power of 1916 contract wage dollar
Typographical Union No. 16 . . .	\$32.50	\$3.50	\$36.00	144.0	144.1 <sup>2</sup>	.999
Printing Pressmen's Union No. 3	33.50	3.50	37.00	142.3	144.1	.987
Franklin Union (Feeders) No. 4	24.50	4.00	28.50	154.0	144.1	1.068
Bookbinders' and Paper Cutters' Union No. 8 (Edition Binders)	28.00	3.50	31.50	136.6 <sup>1</sup>	144.1	.947

<sup>1</sup> In this table and in the tables that follow in computing the wage index number of the Bookbinders, allowance has been made for the dollar increase as of October 1, 1918, already provided for in the 1916 contract.

<sup>2</sup> U. S. Bureau of Labor Statistics, family budget index number of December 1918 for Chicago was 172.2 on a 1914 base of 100. This index number in the table is 172.2 transferred from a 1914 to a 1916 base.

The trend of prices continued upward. In the early summer of 1919, the unions were making joint demands upon the employers for another cost-of-living wage adjustment—this in spite of the fact that they had agreed only five months before not to ask for further wage increases during the life of the various contracts. Possibly in making demands at this time, the unions were taking full advantage of their strategic position. The Chicago printing industry was beginning to recover from the slump which it had experienced prior to and during the war. The employers were running their plants full capacity, consequently they desired to avoid labor troubles as much as possible. In making their demands, the unions were evidently governed more by their strategic position than by the actual increase of 2 per cent in the cost of living since the last adjustments. The Compositors asked for an increase of \$12.00 a week, or 33-1/3 per cent over their existing wages, the Pressmen \$11.00 or 29.7 per cent, the Feeders \$15.50 or 54.4 per cent and the Bookbinders \$23.50 or 74.6 per cent. Three weeks of heated conferences followed between the scale committee of the Franklin-Division and the joint scale committee of the different unions. The employers refused flatly to consider the exorbitant demands of the unions but finally agreed to adjust wages once more on the basis of changes in the cost of living.

For the first time both sides were represented by statisticians. The unions at first attempted to base their case on the increase in wholesale prices for the United States as a whole from 1914 to date, using

the United States Bureau of Labor Statistics wholesale price index number of 202 on a 1913 base of 100. They finally agreed to use retail prices as the basis for the adjustment and the statisticians for both sides were in accord that the United States Bureau of Labor Statistics family budget index number for Chicago was the most accurate available. The Bureau reported that the index number for Chicago for June, 1919 as compared with the December, 1914 base of 100 was 174.47. The employers in turn agreed to apply this index number to the 1914 wage of each union and increase the existing wages by amounts necessary to equal the wages which would be obtained if the 1914 wages for the different unions were multiplied by 174.47. This method was finally adopted in working out the adjustments except that at the request of the union representatives, the total cost-of-living increase to which the unions were entitled was distributed in such a way that the lower paid employees received a larger increase than the higher paid. As the actual cost-of-living computations showed that each union was entitled to an average spread increase of \$4.91, and as three of the unions were granted a \$5.00 increase and one of the unions a \$5.50 increase, the employers gave the unions at this time an average spread of 21½ cents more than the cost-of-living figures showed.<sup>16</sup> The employers insisted, moreover, that a definite method of wage adjustments at stated intervals be provided for the remaining duration of the 1916 contracts. They recognized the futility of expecting an immediate period of price stabilization, but they desired to get away from the haphazard methods of adjusting wages to changes in the cost of living, which they had hitherto followed, and to arrange for future wage adjustments, if any, at certain specified intervals.

As a result a supplemental agreement was entered into between the Franklin-Division and the various unions under date of August 25, 1919, which contained an automatic cost-of-living adjustment clause providing for the adjustment of wages upwards or downwards at intervals of six months during the duration of the different contracts, if the cost-of-living figures for Chicago, reported by the United States Bureau of Labor Statistics showed a change of 5 per cent in either direction. Under no condition were the base wage scales set forth in the supplemental agreement to be reduced. The method of wage adjustment was specifically stated in the supplemental agreement as follows:

Unless it can be shown by the cost-of-living figures of the United States Department of Labor, Bureau of Statistics, that during the six months' period from the date this contract is effective, and at intervals of six months thereafter, the cost of living has increased 5 per cent or more, then and then only shall the officers of the unions herein represented have the right

<sup>16</sup> *Transcript of Arbitration Proceedings, etc.*, April 18, 1921, pp. 123-130.

to ask for a further readjustment for the wage scales herein set forth, provided, that the percentage of increase shall apply only to the 1914 scales, the same basis as has been used to work out present scales, as embodied in this agreement, and, further provided, that should the cost of living for one of the six months' periods decrease by an amount equal to or exceeding the increases, then any increases above the amount now granted in this agreement may be decreased in the same proportion, provided that no figures shall reduce the scales below those set forth in this agreement.<sup>17</sup>

The wage adjustments of August 25, 1919, are shown in detail in Table 5.<sup>18</sup>

TABLE 5.—AUGUST 25, 1919, WAGE ADJUSTMENT

	Previous wage	Wage increase	Total wage	Wage index number 1916 base	Cost of living index number 1916 base	Purchasing power of 1916 contract wage dollar
Typographical Union No. 16....	\$36.00	\$5.00	\$41.00	158.1 <sup>1</sup>	146 <sup>2</sup>	\$1.082
Printing Pressmen's Union No. 3	37.00	5.00	42.00	155.9 <sup>1</sup>	146	1.067
Franklin Union (Feeders) No. 4	28.50	5.50	34.00	183.7	146	1.258
Bookbinders' and Paper Cutters' Union No. 8 (Edition Binders)	31.50	5.00	36.50	159.2	146	1.090

<sup>1</sup> In this table and in the tables that follow allowance has been made in computing the wage index numbers for the Compositors and Pressmen, for the dollar increase already provided for as of May 1 for the one union and June 1, 1919, for the other in their 1916 contracts.

<sup>2</sup> U. S. Bureau of Labor Statistics, family budget index number of June 1919 for Chicago was 174.5 on a 1914 base of 100. This index number in the table is 174.5, transferred from a 1914 to a 1916 base.

The trend of the cost of living continued upward. As the date of expiration of the first six months' period provided for in the August 25, 1919, agreement approached, it was quite evident that the unions would have grounds for asking for another wage adjustment as the cost of living had meanwhile increased more than 5 per cent on the 1914 base. Early in February, 1920, the scale committee of the Franklin-Division held conferences with the joint scale committee of the different unions to determine under the cost-of-living clause of the August 25, 1919, supplemental agreement just what the new adjustments in wages were to be. Much of the tenseness and heated argument which were so characteristic of former conferences of this kind was lacking. Both sides had assembled at a specified time to adjust wages by a specified method on the basis of specified data. Statisticians were employed by both sides and it was jointly agreed that the best available United States Bureau of Labor Statistics cost-of-living data at that time were the retail food prices for Chicago as of January 15, 1920, which the

<sup>17</sup> Supplemental Agreement to the Supplemental Agreement of February 3, 1919 to the Original Contracts.

<sup>18</sup> At this time the contract with the Bookbinders was extended for one year.

U. S. Bureau of Labor Statistics reported as being 97 per cent higher than in 1914. On the basis of the 97 per cent figure, and following the same practice as previously requested by the unions—the lower paid receiving a larger proportion than the higher paid—a flat average spread increase of \$5.00 was granted to the various crafts. This was not following the method exactly which was prescribed by contract, but the departure was by mutual agreement. By this method, the actual cost-of-living computation showed that each union was entitled to an average spread increase of \$4.93. The employers settled by granting each union a \$5.00 increase. A supplemental agreement was entered into between the employers and the various unions jointly, which provided for the new wage adjustment and incorporated in detail a description of the statistical method which had been used in working out the adjustment. Because it is unusual a portion of this supplemental agreement is reproduced below:

It is hereby mutually agreed by all parties that, according to the best United States Bureau of Labor Statistics figures available to our statisticians, as provided in the supplemental contract, the increased cost of living shown by these figures for the period from June 15, 1919 to January 15, 1920, on a 1914 base shows an increase of 22.53 which percentage of increase is to be applied to the 1914 scale of wages of the above named unions according to their original contracts, which are now in full force and effect in determining the scale of wages effective February 25, 1920.

It is mutually agreed by the parties above mentioned that in lieu of the percentage increase shown above applied to the 1914 scale of each union, a flat increase of \$5.00 per week shall be applied to the scale of journeymen of each of the four unions.

\* \* \* \* \*

It is further understood and agreed that the increase on the basic wage effective on and after February 25, 1920 is based and granted on the United States Bureau of Labor Statistics retail food cost-of-living figures which show the increase on January 15, 1920 over December, 1914, for Chicago to be 97 per cent or 22.53 points over 74.47 per cent, the United States Bureau of Labor Statistics cost-of-living family budget figures used in the Wage Adjustment of August 25, 1919 and which showed the increase in the cost of living measured by the family budget, from December, 1914 to June, 1919. It is understood that the cost-of-living figure used in this wage adjustment is 97 per cent on a 1914 base.<sup>19</sup>

The wage adjustments of February 25, 1920 are shown in detail in Table 6.

On August 25, 1920, another six months period of rising prices had elapsed, and again a wage adjustment was arrived at which became effective as of that date and which was incorporated in still another supplementary agreement. On this occasion the statisticians representing

<sup>19</sup> *Supplemental Agreement to Supplemental Agreement of August 25, 1919, effective February 25, 1920.*

TABLE 6.—FEBRUARY 25, 1920, WAGE ADJUSTMENT

	Previous wage	Wage increase	Total wage	Wage index number 1916 base	Cost of living index number 1916 base	Purchasing power of 1916 contract wage dollar
Typographical Union No. 16....	\$41.00	\$5.00	\$46.00	177.2	167.8 <sup>1</sup>	\$1.056
Printing Pressmen's Union No. 3	42.00	5.00	47.00	174.3	167.8	1.038
Franklin Union (Feeders) No. 4	34.00	5.00	39.00	210.8	167.8	1.256
Bookbinders' and Paper Cutters' Union No. 8 (Edition Binders)	36.50	5.00	41.50	181.0	167.8	1.078

<sup>1</sup> U. S. Bureau of Labor Statistics, family budget index number of December 1919 for Chicago was 200.6 on a 1914 base of 100. The index number in the table is 200.6, transferred from a 1914 to a 1916 base. This December 1919 figure was not available at the time the wage adjustment occurred, but is used here as showing the actual status of the cost of living at that date.

both sides reported that the best available United States Bureau of Labor Statistics data on cost of living for Chicago were the complete family budget figures reported as of June 15, 1920. The union representatives agreed that these were the best figures available and as they showed an increase of 114.6 per cent over the 1914 base, the wage adjustment at this time was arrived at through the use of this figure. In addition, an increase of 3 per cent on the 1914 base was allowed the unions because the United States Bureau of Labor Statistics had rendered a belated report on the cost of living in Chicago as measured by the complete family budget as of December 15, 1919, which gave a figure of 100.6 per cent as compared with 1914. Since a figure of 97 per cent had been used in the February, 1920, adjustment, the employers made allowance during the ensuing six months' period, for the discrepancy of 3 per cent when the August, 1920 adjustments were worked out.

In terms of dollars and cents, the actual cost-of-living computations for the six months' period under consideration showed that each union was entitled to an average spread increase of \$3.85. The employers added 65 cents to the \$3.85 when they took into account the 3 per cent discrepancy of the preceding six months' period. This made \$4.50. In response to the appeal of the union representatives that the trend of the cost of living was still upward, the employers added 50 cents more, making a total of \$5.00 average spread increase granted to each union. These wage increases were incorporated in another joint supplemental agreement. While the cost-of-living figures were used as a basis for this adjustment, the fact that the employers granted an average spread of 50 cents more than the figure required, is evidence that the unions used the bargaining power which they possessed at the time

to secure an increase over and above what the terms of their agreement provided for.<sup>20</sup>

The wage adjustments of August 25, 1920, are shown in detail in Table 7:<sup>21</sup>

TABLE 7.—AUGUST 25, 1920 WAGE ADJUSTMENT

	Previous wage	Wage increase	Total wage	Wage index number 1916 base	Cost of living index number 1916 base	Purchasing power of 1916 contract wage dollar
Typographical Union No. 16....	\$46.00	\$5.00	\$51.00	196.8	179.6 <sup>21</sup>	\$1.095
Printing Pressmen's Union No. 3	47.00	5.00	52.00	193.0	179.6	1.075
Franklin Union (Feeders) No. 4	39.00	5.00	44.00	237.8	179.6	1.324
Bookbinders' and Paper Cutters' Union No. 8 (Edition Binders)	41.50	5.00	46.50	203.2	179.6	1.131

<sup>1</sup> U. S. Bureau of Labor Statistics, family budget index number of June 1920 for Chicago was 214.6 on a 1914 base of 100. The index number in the table is 214.6, transferred from a 1914 to a 1916 base.

During the next six months period, August 25, 1920, to February 25, 1921, for the first time the trend of prices was downward. On the first of February, 1921, the scale committee of the Franklin-Division at a conference with the joint scale committee of the various unions, asked for a readjustment of wages downward, in accordance with the terms of the supplemental agreement of August 25, 1919. From the employers' point of view, this was the first test of the principle underlying the agreement for the adjustment of wages downward as well as upward. The statistician representing the employers introduced the United States Bureau of Labor Statistics figures which showed that the complete family budget, cost-of-living figures for Chicago as reported for December 15, 1920, evidenced a decrease from the family budget figures of 114.6 per cent for June, 1920, which was used for the basis for the August, 1920, adjustment, to 93.3 per cent for December 15, 1920, over the 1914 base. Following the statistical method, which was previously used, he showed that the employers were entitled to a flat average spread decrease of \$4.65 effective February 25, 1921.<sup>22</sup>

The unions this time had engaged the services of an economist from a near-by university to represent them as statistician. He agreed that the cost-of-living figures introduced by the employers' statistician were the most complete and accurate available. He then introduced charts to show that wages always lag behind prices during periods of price inflation and that while the employers had adjusted wages on the basis of increases in the cost of living at specified periods, the unions had

<sup>20</sup> *Transcript of Arbitration Proceedings*, etc., April 18, 1921, pp. 170-175.

<sup>21</sup> At this time the Bookbinders extended their contract for six months.

<sup>22</sup> *Transcript of Arbitration Proceedings*, etc., April 19, 1921, pp. 231-232.

had to carry the burden of increasing prices between the dates of the readjustments. The unions used this statistical presentation as a basis for an argument that wages should remain unchanged for the next six months period to compensate for what they had lost in purchasing power of wages between the periods of wage adjustments. The employers in turn maintained that a certain amount of lag was inevitable in the adjustment of wages upward, but that the same lag would appear in an adjustment of wages downward. That is, since wages were to be readjusted downward at specific periods, the unions would get the benefit of the drop in the cost of living during any period preceding the date of adjustment.

Unable to move the employers with the lag argument, the statistician for the unions retired. The unions then tried to pick a technical flaw in the wording of the cost-of-living clause in the August 25, 1919, supplemental agreement. They attempted to twist the wording of this clause to show that the employers were not entitled to a wage reduction as of February 25, 1920, because the employers had asked for an average spread reduction of \$4.65 which was less than the last average spread increase of \$5.00.

After several weeks of argument with almost daily conferences, which at times threatened to end in a declaration of open warfare, at a joint session lasting from one noon until 6 o'clock the next morning, it was decided to settle the controversy by arbitration under terms of an arbitration agreement which were finally acceptable to both sides. This agreement was entered into under date of March 17, 1921. An arbitration board was set up with the dean of a well-known school of commerce as the impartial chairman. The position taken by the employers before this arbitration board, is shown by the following abstracts from their brief:

The employers, who constitute the plaintiff in this proceeding, submit that the construction of this clause of the contract as above outlined, is abundantly sustained not only by the broad purpose for which it was inserted, the testimony of witnesses who drafted and submitted the contract, but furthermore, by the method of its application in the granting of the two increases of wages which took place between August 25, 1919, and February 25, 1921. If this is not the only sensible and intelligent construction of this clause, the employers are at a loss to understand what such construction can be. The clause, as said before, was framed by the employers who certainly are the best qualified to state what its intent was. Furthermore, the evidence stands uncontradicted in the record that the Unions clearly so understood the meaning of this clause during the whole period since August 25, 1919. What caused the Unions to contend otherwise on or about February 25, 1921, is no mystery. It is revealed in the decline in the cost-of-living figures reported by the United States Department of Labor in December, 1920, which if applied as the contract says it must be ap-

plied, would result in a reduction in the wages of these four major Unions, as above indicated.

It was only, however, when the Unions came face to face with a situation clearly covered in the contract pointing to a reduction in the wages that they suddenly became imbued with a mysterious ambiguity and confusion in its terms.

\* \* \* \* \*

The very conditions under which most contracts of this character are drafted, and particularly the one in controversy here, make impossible the exercise of the same degree of care as is found in the drafting of contracts in ordinary commercial affairs. They are usually drafted and signed under pressure and without the assistance of experienced and competent draftsmen, and it is never conceived that said contracts will be subjected to the excessive technical scrutiny which is employed in the consideration of ordinary commercial agreements.

They are intended simply to embody a broad basic principle of adjustment of acute controversies and when they have accomplished this they have served the only purpose for which they are formed. In this very contract of August 25, 1919, the evidence shows that it was signed on a hot summer's night, or, rather at 2 o'clock in the morning on August 25, 1919. For four or five weeks prior to this time there had been many protracted and more or less bitter negotiations, and finally, when everybody was almost at the point of exhaustion, an agreement embodying the suggestions, first of this side and then of the other side, was thrown together and when presented to the joint body was signed with a great sense of relief.

There was no difference of opinion at that time, however, either upon the part of the employers or of the Unions, as to what was the fundamental intent and purpose of the clause in question.<sup>23</sup>

In presenting their case the employers introduced witnesses and a series of charts which traced step by step the statistical method followed in the wage adjustments from 1916 on.

The case for the unions was presented by economic counsel from a well known private statistical organization of Washington, D. C. The counsel did not stress the wording of the cost-of-living clause as a basis for his argument, but built up his case on the "lag" principle to which reference has been made. He also set up a hypothetical family budget as a measure for a fair wage, and emphasized the importance of remuneration for skill.<sup>24</sup>

On May 5, 1921, the arbitration board handed down a unanimous decision to the effect that there should be an average spread reduction

<sup>23</sup> Before an Arbitration Board Franklin-Division of the Franklin-Typotheatae of Chicago vs. Typographical Union No. 16, Pressmen's Union No. 3, Franklin Union No. 4, Bookbinders' and Paper Cutters' Union No. 8, Brief and argument for reduction in Wages in accordance with Supplemental Agreement of August 25, 1919. Chester Arthur Legg, Attorney, F. H. Bird, Consulting Statistician, Chicago, April 20, 1921, pp. 23-26.

<sup>24</sup> Transcript of Arbitration Proceedings, etc., April 22-23, 1921, pp. 822-890.

in the basic scales of wages of the various unions of \$4.35 a week. The board stated that, if it had based its award strictly on the terms of the different agreements, the reduction on the basis of the cost-of-living figures would have been \$4.65. It did, however, make an allowance of an average spread of 30 cents a week to compensate for lost purchasing power in wages during the periods of rising prices due to the fact that wages were adjusted each time on the basis of a cost-of-living index number for a date ten weeks earlier. In arriving at this 30 cents, due allowance was made for the over payments of the employers at the different periods over and above what the cost-of-living figures required.

The board disposed of the "lag" principle upon which the unions had based most of their claim that wages should not be reduced, in the following language:

The present application of the contract of 1919 would, therefore, require an average reduction of \$4.65, in the absence of strong considerations to the contrary. Are there any such considerations?

(5) It has been urged that the previous adjustments made every six months under the agreement of 1919 were not proper and adequate, that the employees did not get all they were entitled to under such previous adjustments, and that, therefore, wages ought not now to be reduced.

This argument was developed at length by counsel for the Unions. It rests upon the assumption that there has been a "lag" between the wage advances and the cost of living. That is, it is argued that wages were advanced only once every six months, whereas the level of commodity prices was advancing regularly day by day. Therefore, it was urged that this so-called "lag" should now be compensated by maintaining wages at the present level.

The Board has given careful and earnest attention to this argument. We find that the so-called lag naturally divides itself into parts; first, the six months' period, during which wages remain fixed, while prices may be fluctuating either upwards or downwards; second, the ten weeks period between the date of the wage adjustments (in February or August) and the date for which the index number is announced (as of December 15 or June 15).

The Board does not feel that any importance can be attached, for purposes of this decision, to the six months' period. It rests this decision upon the following grounds:

(a) It was not contemplated by the agreement of 1919 that wages would always correspond to the penny with the cost of living. This is shown by the fact that the agreement provides there shall be no readjustment of wages whatever, at the expiration of the six months' periods, unless the cost of living has increased or decreased by at least 5 per cent.

(b) Such a "lag," if any exists, cannot be definitely ascertained, computed, or measured, since the Department of Labor announces the index figure only once every six months.

(c) Such a theory could be admitted, only if it could work both ways. But it is evident that if, during any six months' periods, the cost of living

should go down rather than up, the theory could not be applied. For wages would remain at the same point for the six months' period, even though the cost of living declines. Thus, the employer would have paid wages to the employees during the period, in excess of the cost of living.

But there is no way by which this overpayment could be recouped to the employer. The employees could not be compelled to dig down into their own pockets to make this up to the employer. Nor would it be feasible to reimburse the employer by permitting him to reduce wages, for the succeeding six months, to a point lower than would be justified by the cost of living figure. To do this would lower and undermine the employees' standard of life.

Obviously, the lag theory, insofar as it concerns the six months interval between wage adjustments, could not apply both ways. It could not work when living costs are going down. Therefore, it is inadmissible.

(6) However, the Board is inclined to attach some importance to the ten-week period, between the dates of the various semi-annual wage adjustments, and the dates to which the cost of living figures apply. During each of these ten-week periods referred to, that is, from December 15 to February 25, 1920, and from June 15 to August 25, 1920, wages were being paid based on the index number for the previous six months' period. Therefore, it may be said that the wage adjustments did not completely compensate the employees for the increased cost of living.

This was through no intent nor design upon the part of anyone. It was the natural and inevitable result of the fact that the wage adjustments were made ten weeks later than the date to which the index number applied. True, this arrangement, including the date of the semi-annual adjustments, was made by mutual agreement. But it was probably not anticipated, in 1919, that the increase in the cost of living would be so marked, nor so rapid. Ordinarily, this "lag" during a ten-week period might not prove important. But in 1919 and 1920 prices were rising rapidly.<sup>25</sup>

It will be observed that by resorting to arbitration the employers finally obtained a substantial wage reduction under the cost-of-living adjustment clause in the August 25, 1919 supplemental agreement, but not until two months after it was due. Furthermore the reduction was based on the December, 1920, Chicago family budget index number of 193.3 which by May, 1921 had dropped to 178.4.<sup>26</sup> Whereas during the periods of adjustment of wages upward the employers admitted their obligations to the unions promptly and without question, when a period arrived during which the unions were under obligations to the employers they attempted to ignore their contractual obligations but did finally agree to a settlement through arbitration. In the last

<sup>25</sup> *Decision of the Arbitration Board, Ralph E. Heilman, Chairman, Franklin Division of Franklin-Typotheiae of Chicago vs. Typographical Union No. 16, Printing Pressmen's Union No. 3, Franklin Union No. 4, Bookbinders' and Paper Cutters' Union No. 8, May 5, 1921*, pp. 6-9.

<sup>26</sup> U. S. Bureau of Labor Statistics, *Monthly Labor Review*, July, 1921, p. 106. By September, 1921 the index number had dropped to 175.3. U. S. Bureau of Labor Statistics, *Advance Sheet* No. 1245, released October 24, 1921.

analysis, however, wage adjustments both upward and downward on the basis of changes in the cost of living were accomplished in accordance with the provisions of the cost-of-living clause of August 25, 1919 supplemental agreement.

The wage adjustments brought about by the decision of the arbitration board effective for a period of six months from May 5, 1921 are shown in detail in Table 8:

TABLE 8.—MAY 5, 1921, WAGE ADJUSTMENT

	Previous wage	Wage decrease	Total wage	Wage index number 1916 base	Cost of living index number 1916 base	Purchasing power of 1916 contract wage dollar
Typographical Union No. 16....	\$51.00	\$4.35	\$46.65	180.6	149.2 <sup>1</sup>	\$1.210
Printing Pressmen's Union No. 3	52.00	4.35	47.65	177.3	149.2	1.188
Franklin Union (Feeders) No. 4	44.00	4.35	39.65	214.3	149.2	1.430
Bookbinders' and Paper Cutters' Union No. 8 (Edition Binders)	46.50	4.35	42.15	184.8	149.2	1.238

<sup>1</sup> U. S. Bureau of Labor Statistics, family budget index number of May 1921 for Chicago was 178.4 on a 1914 base of 100. The index number in the table is 178.4, transferred from a 1914 to a 1916 base.

A summary table follows which reviews the effect of the different wage adjustments, from November, 1916 to May 5, 1921, on the purchasing power of the 1916 contract wage dollar of each union at the date of each adjustment. It will be observed that as a result of the different adjustments the 1916 contract wage dollar of the Typographical Union had a purchasing power on May 5, 1921, of \$1.21; of the Pressmen's Union \$1.188; of the Feeder's Union \$1.430; of the Binder's Union \$1.238. While the purchasing power of the 1916 contract wage dollar at the dates of the 1917 and 1918 adjustments was in the neighborhood of 93 to 95 cents for the various unions, it was brought up approximately to par by the February 5, 1919, adjustment and from then on it was above par at the different dates of adjustments. It should be also observed that from February 5, 1919, on, the purchasing power of the Feeders' 1916 contract wage dollar increased much more at the different dates of adjustment than did that of the other unions. Eventually the differential between the wages of Pressmen and Feeders will have to be increased, as the cost-of-living adjustments have brought the wages of semi-skilled Feeders too close to the highly skilled Pressmen.

From an analysis of the summary table, the conclusion is reached that during the five year period 1916-1921 taken as a whole, a period of rapid upward price movement followed by a downward trend, the purchasing power of the 1916 wage contract dollar of the various unions maintained an unusual degree of stabilization.

TABLE 9.—COST OF LIVING WAGE ADJUSTMENTS BETWEEN THE FRANKLIN DIVISION OF THE FRANKLIN TYPOTHECTAE OF CHICAGO AND VARIOUS PRINTING TRADE UNIONS, 1916-1921.

Dates of wage adjustments	Compositors		Pressmen		Feeders		Binders	
	Wage index number 1916 base	Cost of living index number 1916 base <sup>2</sup>	Wage index number 1916 base	Cost of living index number 1916 base <sup>2</sup>	Purchasing power of 1916 contract wage dollar	Wage index number 1916 base	Cost of living index number 1916 base <sup>2</sup>	Purchasing power of 1916 contract wage dollar
November 1916.	100	100	\$1.00	100	\$1.00	100	\$1.00	100
December 1917.	110 <sup>a</sup>	118.6 <sup>b</sup>	\$927	109.6	\$924	113.5	118.6	111.3
June-October 1918.	130	138 <sup>b</sup>	\$942	128.8	138	132.4	138	127.2
February 3, <sup>1</sup> 1919.	144	144.1 <sup>c</sup>	\$999	142.3	144.1	\$987	154	144.1
August 25, <sup>1</sup> 1919.	158.1	146 <sup>d</sup>	\$1,082	155.9	146	\$1,067	183.7	146
February 25, 1920.	177.2	167.8 <sup>e</sup>	\$1,056	174.3	167.8	\$1,038	210.8	167.8
August 25, 1920.	196.8	179.5 <sup>f</sup>	\$1,095	193	179.5	\$1,075	237.8	179.5
May 5, 1921.	180.6	149.2 <sup>g</sup>	\$1.21	177.3	149.2	\$1,188	214.3	149.2

<sup>1</sup> Beginning with August 25, 1919, allowance has been made in computing the wage index numbers for the compositors and pressmen, for the one dollar increase provided for as of May 1, 1919 for the one union and June 1, 1919 for the other in their 1916 contracts. Beginning with Feb. 3, 1919, a similar allowance has been made for the one dollar increase of the bookbinders provided for Oct. 1, 1918, in their 1916 contract.

<sup>2</sup> The cost of living index numbers in the table are the Chicago family budget figures of the U. S. Bureau of Labor Statistics transferred from their 1914 base to a 1916 base. The figures used were the government figures as of <sup>a</sup> Dec. 1917, <sup>b</sup> Aug. 1918, <sup>c</sup> Dec. 1918, <sup>d</sup> June 1919, <sup>e</sup> Dec. 1919, <sup>f</sup> June 1920, <sup>g</sup> May 1921. Although the arbitration award of May 5, 1921 was based on the cost-of-living figure of December 1920 the wage decrease awarded was not retroactive and took effect as of May 5. The cost-of-living figure for that date has accordingly been used in the above table.

During the first two years of the period the wage adjustments were brought about by "direct action" on the part of a union made up of the lowest paid and the least skilled, who felt most the pressure of the increasing cost of living. The other unions in turn profited. Then followed a period of government regulation which ended in the employers and the union finally themselves adopting a method by which through constitutional processes wage adjustments were made at specified times according to a specified statistical method on the basis of specified cost-of-living data. For government regulation was substituted government coöperation in the prompt furnishing of reliable cost-of-living data.

As a result of the cost-of-living wage adjustment clause inserted in the August 25, 1919, *Supplemental Agreement*, practically continuous production was obtained at a time when the demand for printing was enabling employing printers to get back on their feet again financially after several years of rather slack business and making it possible for them to grant substantial increases in wages.

It was a time when other industries were experiencing expensive shutdowns because of labor trouble principally due to the depreciation of the purchasing power of money wages. Cessation of production during this period would have been costly to both employers and employees in the Chicago printing industry. They succeeded, however, in stabilizing conditions by substituting for "rule of thumb" collective bargaining, a more accurate method based on a process of investigation of the facts at specified intervals. True, when the facts showed that the employers were entitled to a reduction in wages the unions resisted, but they eventually capitulated when the facts were reviewed by an arbitration board.

What will happen in the Chicago printing industry when the five year contracts expire in November, 1921, it is impossible to predict. The employers are under pressure to produce at lower costs. This the unions must recognize.

While collective bargaining wherever it exists is fundamentally the pitting of the economic power of organized employers against that of organized employees, if it is possible to base the bargain on the investigation and acknowledgment of facts on an issue such as changes in the cost of living, why is it not possible to follow the same method in approaching the production issue?

In the past, American trade unionism has made its bargain with employers to a large extent on the basis of getting what it had power to get regardless of the effect on the employers. This program of expediency and opportunism undoubtedly has obtained results. But can not farsighted union leaders see that there is a limit to which they can

force employers in their continual drive for higher wages and shorter hours without consideration of their production problems?

No system of wage adjustment can be successful over a period of time unless it recognizes the fundamental principle of payment for results. One reason for the open shop movement in the United States is the protest of employers against restriction of output with its excessive cost of production. Would it not be a constructive step on the part of trade union leaders to permit the adoption of production standards as part of the collective bargaining process, these standards to be arrived at on the basis of investigation of scientific production methods? The old slogan of a "fair day's work for a fair day's pay" is after all the nub of what ought to be accomplished through collective bargaining and what could be accomplished if the parties to the bargain adopted the right approach.

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